ASAZGUA's Energy Compact Commitments 2021-2030

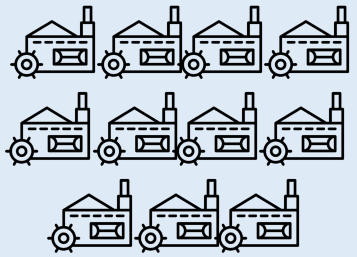
Luis Miguel Paiz

Guatemalan Sugar Producers Association

ASAZGUA

SUSTAINABLE WATER & ENERGY SOLUTIONS NETWORK

About ASAZGUA



11 Sugar Mills

ASAZGUA

1957

FUNDAZUCAR GUATEMALA

1990

engicaña

1992

EXPOGRANEL, S.A.

1994

ICC

2011

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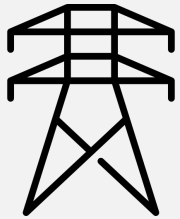
SDG 7: Renewable Energy

Used 100% of the biomass obtained after crushing to produce energy.

Covered up to 30% of the national energy demand during Harvest Season.



Produced 173 million gallons of ethanol (2020).

The Guatemalan Sugar Industry, after decades of electrical power instability during dry season (when hydropower was low), invested in energy plants to produce **renewable energy with biomass** (from sugarcane bagasse). It also produces ethanol to be used as fuel.

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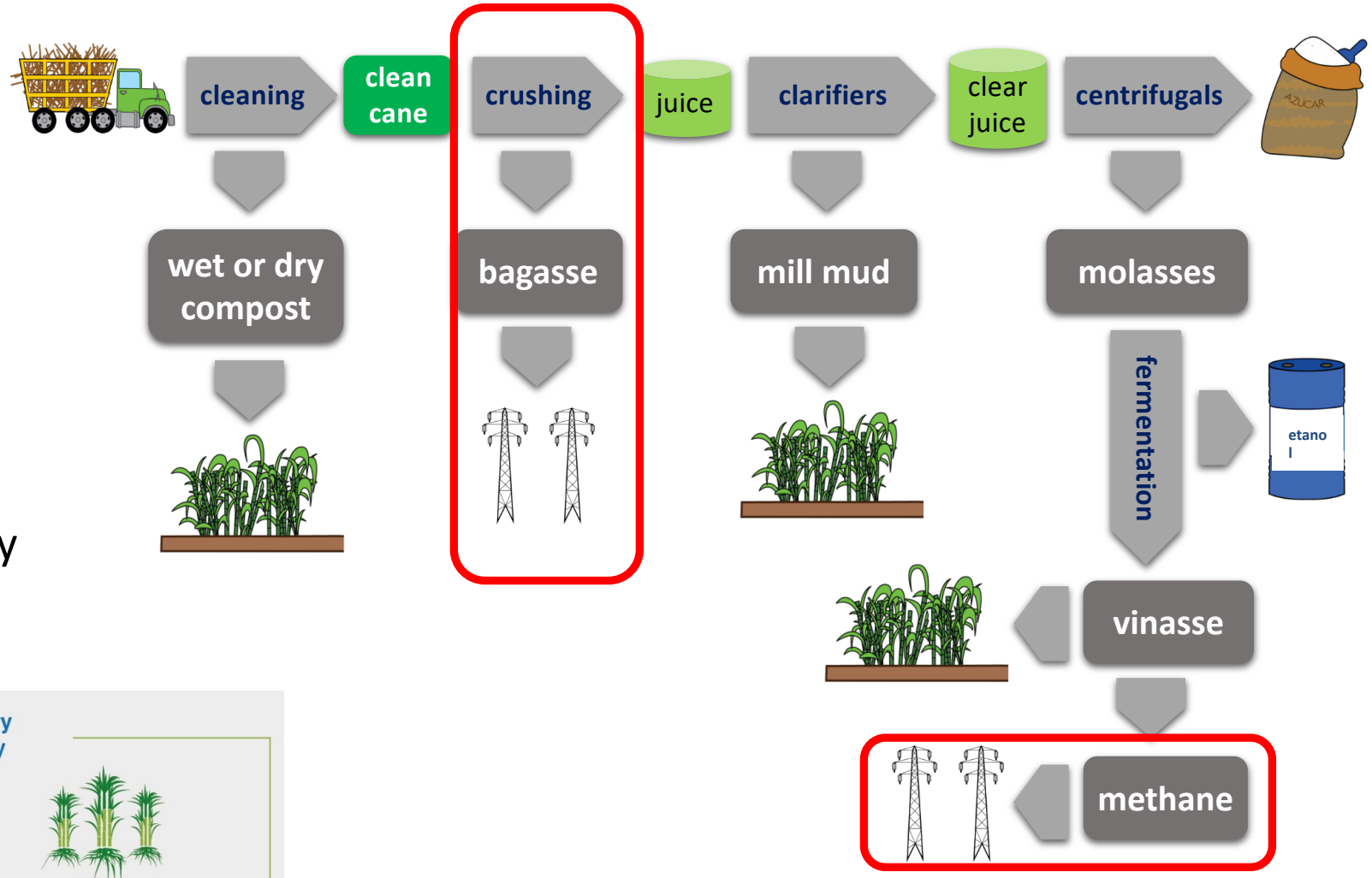
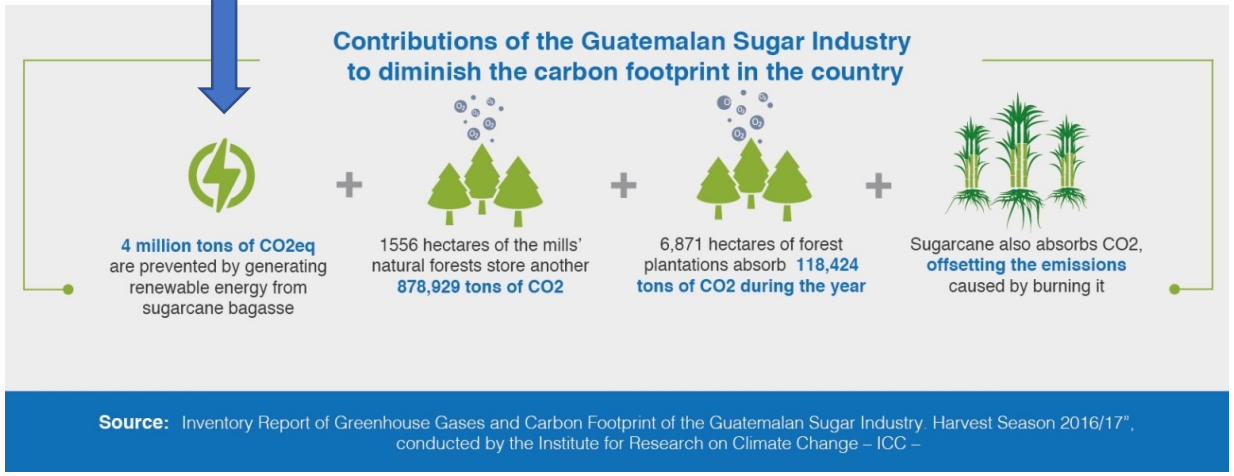
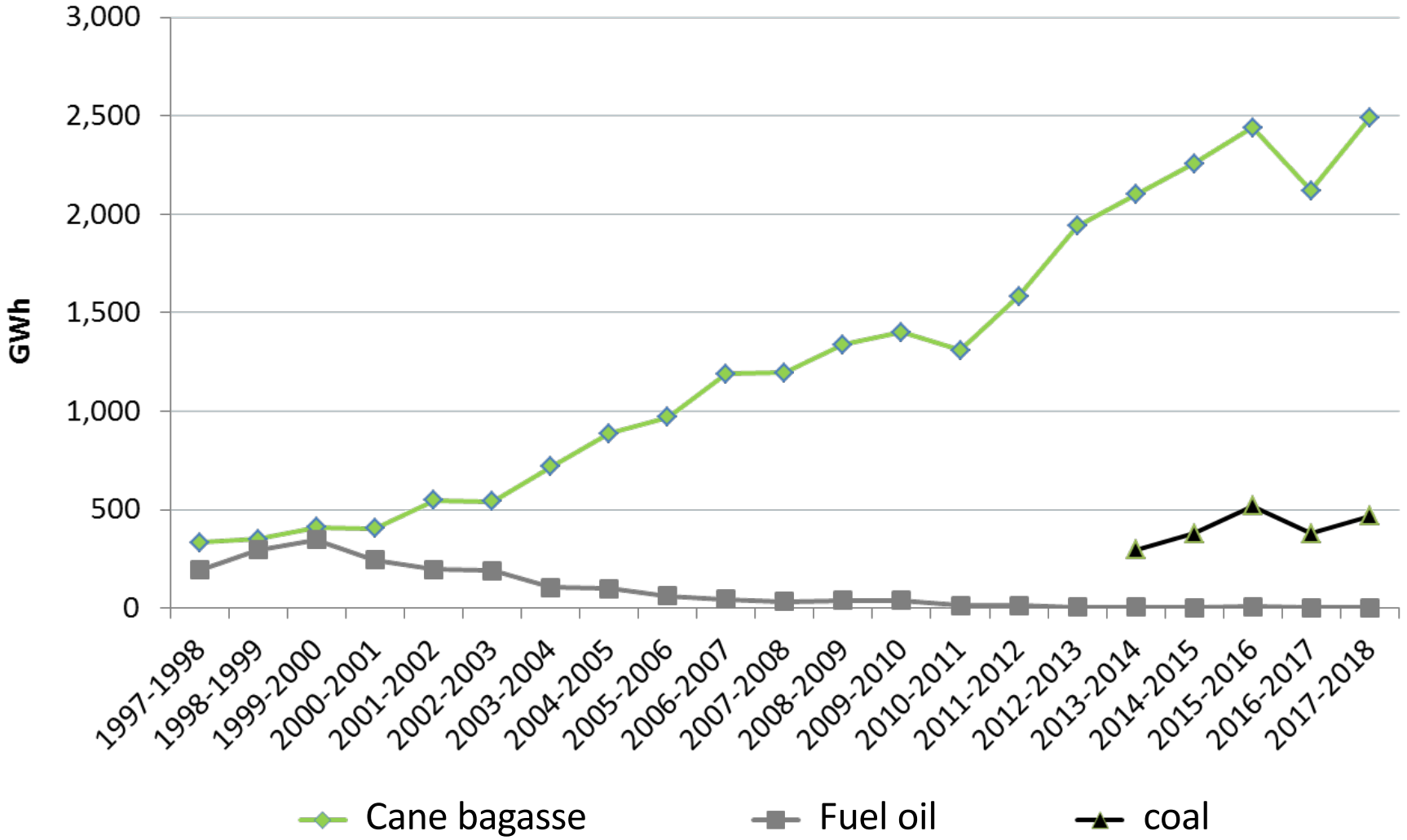
Electricity generation from sugarcane



4 million tons of CO_{2e} are avoided annually through generating electricity from sugarcane



Electricity generation in the past two decades in the sugar industry of Guatemala



Growth has resulted from growth of cane crushed but also from **doubling efficiency**

Energy Compact Commitments

By 2030, to produce 100% of the electricity necessary to self-supply the Company's activities, and that this electricity be renewable.

- Baseline: 93% in 2020.
- Sugar companies in Guatemala use on average about 34% of the electricity they generate for their own industrial processes, especially sugar production. The remaining which is on average about 66 % contributes to the national electricity grid (Source: ICC).
- The use of sugarcane biomass for the generation of electricity allows Guatemala to avoid over 4 million tons of CO2eq that would have resulted if coal were used, considering that this is generated during the dry season (Source: ICC).

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Continue producing electricity for the operation of the sugar mills and to cover at least 30% of the electricity demanded in the country, all by using 100% of the residue biomass (bagasse) obtained during sugar production, which is renewable energy.

- In Guatemala, cogeneration by the sugar agroindustry is the most stable and durable option after hydropower in the short and mid-term.
- The cogeneration controls and reduces the price of energy; it reduces operational costs so that energy reaches the users at a lower price.
- The electric generation of the industry has provided in the past 16% of the electricity exports from Guatemala to the Central American market and 7.8% of the electricity exports to Mexico (Source: ASAZGUA/Cengicaña).

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Increase production of ethanol by 20% to cover local and international demand.

- Baseline: 173 million liters in 2020.
- Installed capacity: 250 million liters per year.
- Production mainly for exportation.
- Currently working on a legislation for a 10% ethanol blend mandate on the internal market.
- The reduction potential of a 10% ethanol blend for Guatemala is estimated at 233,333 tons CO2eq/year, helping the country accomplish its commitments to the Paris Agreement (Source: ICC).

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Increase by 30% the investment in research and development, particularly that oriented to improving the acquisition, use and management of energy.

- Baseline: US$ 100,000 in 2020.
- Resources directed to the research and development programs of Cengicaña, the Sugarcane Research Center of Guatemala.
- Constantly working on sugar cane varieties more resilient to climate change and with higher yields.
- 3°worldwide in productivity of sugar per hectare (ISO Sugar Yearbook 2020), mainly because of the research done by Cengicaña.

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